

# Model 61 Accelerometer

- DC Response**
- Durable Cable**
- Small Package**
- Reliable Performance**

**Ideal for  
In-Dummy  
Crash Testing**

## DESCRIPTION

The **Model 61** accelerometer is based on an advanced piezoresistive MEMS sensing element which offers exceptional dynamic range and stability. This unit features a full bridge output configuration with a temperature range from -20°C to 85°C. This unit exhibits superior shock survivability and a flat amplitude/phase response up to 3kHz.



## FEATURES

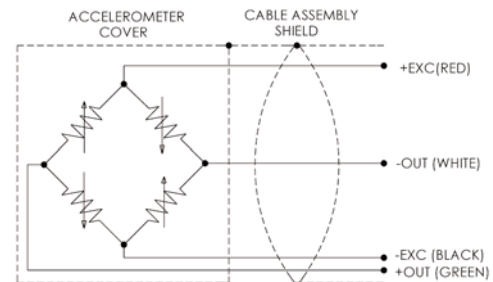
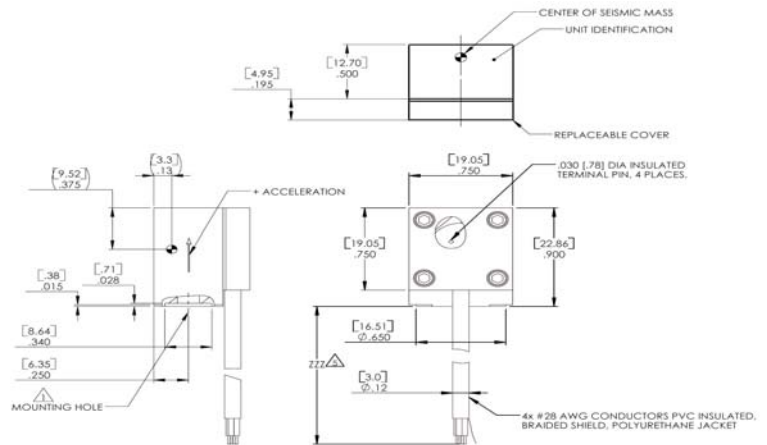
- ◆ 2<sup>nd</sup> GEN MEMS Sensing Element
- ◆ 750 g Full Scale Range
- ◆ 2-10 Vdc Excitation
- ◆  $\pm 25$  mV Zero Offset
- ◆ 1% Transverse Sensitivity Available

## APPLICATIONS

- ◆ In-Dummy
  - Head
  - Thorax
  - Pelvic

## dimensions

(Dimensions in inches)



# Model 61 Accelerometer

## performance specifications

All values are typical at +24°C, 100 Hz and 10 Vdc excitation unless otherwise stated. Measurement Specialties, Inc. reserves the right to update and change these specifications without notice.

Parameters	Value	Unit	Notes
<b>DYNAMIC</b>			
Range	±750	g	
Sensitivity	0.35	mV/g	
Frequency Response	0 to 2000	Hz	±5%
	0 to 3000	Hz	±1dB
Resonance	>20,000	Hz	Gas damped, Q~0.3
Non-Linearity	±1	%FSO	
Transverse Sensitivity	<3	%	1% available
Zero Acceleration Output	<±25	mV	MAX
Thermal Zero Shift	±0.04 (±0.02)	%FSO/°C(%FSO/°F)	0 - 50°C(32 to 122°F)
Thermal Sensitivity Shift	±0.04 (±0.02)	%/°C(%/°F)	0 - 50°C(32 to 122°F)
<b>ELECTRICAL</b>			
Voltage Excitation	2 to 10	Vdc	Output ratiometric to excitation. Do not reverse polarity.
Input Resistance	6500-7800	Ω	Measured between +EXC and - EXC
Output Resistance	2700-4800	Ω	Measured between +OUT and - OUT
Insulation Resistance	>100	MΩ	At 100 Vdc, leads to case and shield
Ground Isolation			Shield is connected to cover but isolated from mounting surface
<b>ELECTRICAL</b>			
Cable Output Connections	+EXC	RED	28 AWG Polyurethane Insulated
	-EXC	BLACK	28 AWG Polyurethane Insulated
	+OUT	GREEN	28 AWG Polyurethane Insulated
	-OUT	WHITE	28 AWG Polyurethane Insulated
	CABLE SHIELD	N/A	Braided Wires
	CABLE JACKET	WHITE	
<b>PHYSICAL</b>			
Case Material			Aluminum
Cable Connections			Integral 30 foot cable
Weight	18	gram	
Mounting			10-32 UNF or M5 X 0.8
Mounting Torque	18 (2)	lb-in (Nm)	
<b>ENVIRONMENTAL</b>			
Shock Limit	5000	g	
Operating Temperature	-20 to +85 (-4 to +185)	°C (°F)	
<b>PART NUMBERING</b>			
Model Number + Range (g's) + Excitation Vdc + Cable Length + Options			(see sample below)

## ordering information

61Z-750-ZZ-ZZZ-XY



Custom connector options are available.

Contact Measurement Specialties, Inc. for applicable model number.